



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/723,389

11/25/2003

Thomas Redden Veariel

2003B103/2

8869

23455 7590 05/18/2007  
EXXONMOBIL CHEMICAL COMPANY  
5200 BAYWAY DRIVE  
P.O. BOX 2149  
BAYTOWN, TX 77522-2149

EXAMINER

BODAWALA, DIMPLE N

ART UNIT

PAPER NUMBER

1722

MAIL DATE

DELIVERY MODE

05/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/723,389	Applicant(s) VEARIEL ET AL.	
	Examiner Dimple N. Bodawala	Art Unit 1722	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 April 2007, and 14 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 36-64 and 72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36-64 and 72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Amendment***

Claims 36-64, and 72 are pending.

In view of the amendment, filed on April 16<sup>th</sup>, 2007 following rejections are withdrawn from the previous office action, mailed on February 16<sup>th</sup>, 2007.

- ✓ Rejection of claims 36-38,44,47,51-53,56,58-59,62,and 65 under 35 U.S.C. 102 (b) as being anticipated by Courval et al. (U S Patent No. 5,204,045).
- ✓ Rejection of claims 36,38,40,42,47, and 51-55 under 35 U.S.C. 102 (b) as being anticipated by Bentivoglio et al. (U S Patent No. 4,830,545).
- ✓ Rejection of claims 36,38-42,44-55,57,59-65,and 72 under 35 U.S.C. 102 (b) as being anticipated by Dudley (U S Patent No. 4,123,207).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 51-64, and 72 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description

Art Unit: 1722

requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 51 and 72 contain the new limitation such as " a temperature greater than from about 245 C to about 372 C", which does not disclose in the disclosure of instant application. The disclosure suggests the temperature from about 245 C to about 372 C. Therefore, appropriate correction is required.

**New grounds of Rejection**

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 36-39, 51-53, 56, and 72 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiromi et al. (JP 58-217327).

Hiromi ('327) discloses the extrusion apparatus which comprises the die with upstream face, down stream face, a passage having a first opening in upstream face whereby the molten resin at bulk temperature may be received and a second opening in the downstream face whereby molten resin may be extruded; and a heater (2,4) proximate the downstream face and

Art Unit: 1722

proximate with the passage at downstream face and capable of locally heating the molten resin to a temperature from about 280 C - 350 C (See abstract, figure 1). It further teaches that the passage is generally cylindrical and having substantially uniform diameter from upstream face to the downstream face (See figure 1). Figure 1 teaches that the heater is concentric with the passage, wherein the passage passes through the portion of the heater, such that the portion defines the wall of the passage proximate the downstream face.

Furthermore, figure 1 discloses the extrusion die assembly with an intermediate zone for conveying the molten material. It further teaches that the heater concentric with the extrusion orifice pattern, and heating means is proximate said exit opening. It further teaches that the orifice and the passage are fluidically connected, and whereby the heater is capable of locally heating the molten material passing out of the orifice to a temperature about 280 C - 350 C by passing through the passages of the heater, and means to provide the electrical energy to the heater.

Hiromi ('327) discloses all the claimed structural limitations, and, thus, the claims are anticipated.

**New grounds of Rejection**

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in

Art Unit: 1722

order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 36-46, 51-61, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leffew et al. (U S Patent No. 6,409,491).

Leffew ('491) discloses the extrusion die assembly (14) with the die plate (4), which comprises an upstream face (11); a downstream face (12); a passage (15) having a first opening in the upstream face (11) whereby molten resin at bulk temperature may be received and a second opening in said downstream face (12) whereby molten resin may be extruded; and a heater (2) proximate said downstream face (12) and proximate with the passage (15) at the down stream opening and capable of heating the molten resin to a temperature, wherein the die plate (4) is monolithic die plate. It further teaches that the die plate (4) comprises the intermediate zone (9) for conveying the polymer melt (See figure 1). Figure 1 further teaches that the passage (15) is generally cylindrical and having a substantially uniform diameter from the upstream face (11) to down stream face (12). It further teaches that the heater (2) is concentric with the passage, wherein the passage (15) pass through the portion of the heater, such that the portion defines the wall of the

passage proximate the down stream face (12). Figure 1 further teaches that the die plate (4) comprises the first plate having the upstream face (11) and a second plate having the downstream face (12) and heater (2), and also plurality of passage, wherein said first and second plate are fluidically connected by the passage (15). (See col.2 lines 18-48).

Figure 1 further teaches that the extrusion die assembly (14) having a plurality of extrusion orifices and the monolithic heater (2) in a resin shaping apparatus comprises a heater having first face to engage with the orifice, and second face opposite to the first face. It further teaches that the die plate is associated with the combination of a band and cartridge heater, means to provide electrical energy to the heater (See col.1 lines 21-32).

Leffew ('491) discloses all claimed structural limitations as discussed above. He further teaches that the heater is capable of heating the polymer at a predetermined temperature, however does not provide the temperature range at which the heater is capable of being operated.

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Leffew ('491) by providing the heater capable of heating to the temperature range as recited in the claims I order to

Art Unit: 1722

provide the desired heating at a wide range of temperature for melting a variety of polymers inherently having a wide range of melt temperatures.

With regard to the specific temperatures recited in claims 36, 51 and 72 such relates to the intended use of the claimed apparatus structure, which does not impart patentability to the claims. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed the structural limitations, *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). The manner in which machine is to be utilized is not germane to the issue of patentability of the machine itself, *In re Casey*, 152 USPQ 235,238. Intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530. Purpose to which the apparatus is to be put and expression relating the apparatus contents thereof during the intended operation are not significant in determining patentability of an apparatus, *Ex Parte Thibault*, 164 USPQ 666.

Claims 47-50 and 62-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leffew et al. (U S Patent No. 6,409,491) in view of Dudley (U S Patent No. 4,123,207).

Art Unit: 1722

Leffew ('491) discloses all claimed structural limitations as discussed above, but does not disclose the die plate made of material, the insulation material, and also the deposition of insulation material.

In the analogous art, Dudley ('207) discloses the die plate, which is made from stainless steel, or like material (See col.3 lines 60-68). It further teaches that either low thermal conductivity material or Teflon insulates the die plate, wherein the Teflon consists the higher temperature property (See col.4 lines 20-27).

Claims 48-50, and 63-64 are recited the limitations of the process steps for depositing the insulation material either spray coating techniques or vapor deposition techniques. With regard to the claim recitations regarding the method of forming the apparatus, such relate only to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claims. The determination of the patentability is based on the product apparatus itself, *In re Brown*, 173 USPQ 685, 688, and the patentability of the product does not depend on its method of the production, *In re Pilkington*, 162 USPQ 145, 147; *In re Thrope*, 227 USPQ 964 (CAFC 1985). Therefore claims 48-50, and 63-64 are unpatentable over Leffew et al. (U S Patent No. 6,409,491) in view of Dudley (U S Patent No. 4,123,207).

Art Unit: 1722

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Leffew ('491) by providing the material of the die plate because such an alignment utilizes the steam to maintain the material being extruded in a molten state (See col.1 lines 54-61) as suggested by Dudley ('207).

#### ***Response to Arguments***

Applicant's arguments with respect to claims 36, 51 and 72 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

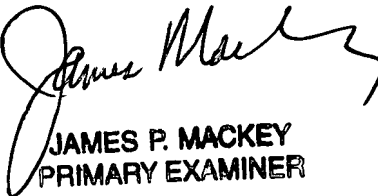
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dimple N. Bodawala whose telephone number is (571) 272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra N. Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1722

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DNB

  
JAMES P. MACKEY  
PRIMARY EXAMINER  
5/16/07